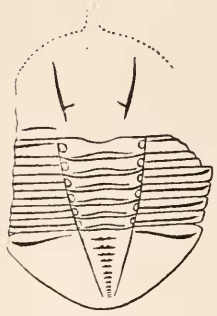
DESCRIPTION OF NEW SPECIES OF FOSSIL CRUSTACEA FROM THE LOWER SILURIAN OF TENNESSEE, WITH REMARKS ON OTHERS NOT WELL KNOWN.

BY J. M. SAFFORD AND A. W. VOGDES.

Ampyx Americanus, n. s.



General outline broadly oval, glabella somewhat claviform, slightly convex, narrowing behind the middle and widening out slightly at its junction with the occipital ring; it is marked at each side by one or more oblique furrows, the condition of the three specimens before us do not clearly indicate more than one pair. Projecting spine broken off. The cheeks are broad and rounded towards the margins. Genal spines broken off. Facial sutures not observed.

The axis is broad anteriorly and gradually diminishes, being well defined by its broadly convex form; the rings are deeply furrowed centrally. The pleuræ are six in number, straight and deeply grooved, terminating in obtusely pointed points, similar to those of *Ampyx nudus*. [Barrande Syst. Sil. Boheme, Vol. 1, Pl. 5, fig. 14.]

The pygidium is triangular in form, the axis being prominent, gently tapering to an obtuse point on the posterior border. It is marked with 13 or more rings, with a central row of nodes. The sides have only one pair of side ribs, which are deeply furrowed outwards cutting off the posterior portion of the tail.

Geological position and locality, Trenton group, near Bulls Gap on the road to Russelville, Tenn. Cabinet of J. M. Safford.

Affinities: We have compared the Tennessee species with the 17 described species of the genus *Ampyx* and find that it differs in detail from all of them. It has affinities with *Ampyx nasutus*, Dalm. which has the same number of thoracic segments, its pygidium being marked with only one lateral side furrow on each side. From this *A. Americanus* can be readily distinguished by its glabella, broader

pygidium and its central row of nodes along the axis of the pygidium.

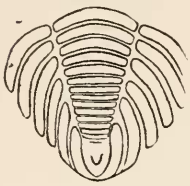
Mr. Edward Forbes, [Mem. Geol. Survey United Kingdom, Dec. 2, 1849, pl. X] has suggested the new generic name of *Brachampyx* for species like the above, with six thoracic segments and short and rounded heads, to separate them from species of the genus *Ampyx* with five thoracic segments and longheads. Length of largest specimen 27½ mm., head 11 mm., thorax 8½ mm., pygidium 8 mm., greatest width of tail 20 mm., length of pygidium, small specimen, 6 mm.

Encrinus varicostatus, Walcott.

Encrinurus varicostatus, Walcott, 1877, Adv. Sheets 31st. Rept. N. Y. State Cab. Nat. Hist. p. 16; 31st. Rept. N. Y. State Cab. Nat. Hist. p. 69.

Cryptonymus varicostatus, Vodges, 1878, Mon. genera Zethus, Encrinurus and Cryptonymus, p. 27.

Encrinurus excedrinus, Safford, 1869, Geology Tennessee, p. 290.



The only known part of this species is the pygidium, it is subtriangular in outline, width slightly greater than its length, convex, axis tapering to a blunt point and marked with 13 or more rings extending entirely across it as far as the last pleuræ, with possibly 6 or 8 more. The sides are marked with 6 ribs, decreasing in length gradually, the last pair coalescing with the axis, and separated from it by a shallow groove. Surface granular, without nodes. Length of largest specimen 7 mm., width 7½ mm. Geological positions and locality, Trenton limestone, Lebanon, Tenn., Cedar Glades.

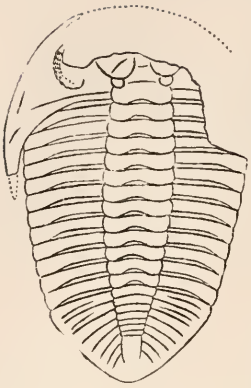
Mr. C. D. Walcott says that his specimens have about 16 smooth rings; the anchylosing of the posterior rings renders it difficult to determine the exact number.

Trenton limestone, Mineral Point, Beloit, &c., Wisconsin.

Chasmops Troosti, Safford.

Dalmanites Troosti, Safford, 1869, Geol. Tennessee, p. 290.

Description: General form narrowly ovate, convex, head semicircular, genal angles produced into spines extending to the fifth thoracic segment. Eyes prominent, faceted glabella large, clavate. The specimem is not in condition to record the minor details of the head. Thorax with 11 segments, axis prominent, convex, tapering



posteriorly. Pleuræ grooved about half their length. Pygidium triangular, axis prominent and tapering to a blunt obtuse point, marked with about 9 axial rings; lateral lobes with seven ribs, the first two pair are grooved.

Geol. position, Trenton group. Murfreesboro, Tennessee, also Stone River 6 miles north of Murfreesboro.

This species has some affinities with *Dalmanites intermedius*, Walcott, from the Trenton group of Wisconsin, but in minor details it can readily be distinguished from it.